

Application Serial No.: 09/733,788  
Attorney Docket No.: 0190143

### REMARKS

This Amendment and Response is in response to the *Final Office Action* of June 17, 2005, where the Examiner has rejected claims 1 and 3-23. By the present amendment, claims 1, 5, 9, 16 and 18-20 have been amended, and claims 3-4, 10-15, 17 and 21-23 have been cancelled. After the present amendment, claims 1, 5-9, 16 and 18-20 are pending in the present application. Allowance of outstanding claims 1, 5-9, 16 and 18-20 in view of the following remarks is respectfully requested.

#### **A. Rejection of Claims 1, 3-8, 16-21 and 23 under 35 USC §103(a)**

The Examiner has rejected claims 1, 3-8, 16-21 and 23, under 35 USC §103(a), as being unpatentable by Kingetsu, et al. (USPN 6,181,379) ("Kingetsu") in view of Matsui, et al. (USPN 5,448,292) ("Matsui").

By the present amendment, applicant has amended claim 1 to recite "an image processor that white-balances the captured color image to generate a white-balanced color image by multiplying each red, green or blue photocell value by one of red, green or blue white-balance coefficients, respectively, and without interpolating each red, green or blue photocell value with values from other photocells, wherein the image processor determines whether the white-balanced color image is substantially gray-scale, and if so, the image processor converts each of the chromatic intensity values to a gray-scale luminance value."

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In color imagers, each pixel is represented by a triplet of adjoining photocells, unlike the gray-scale imagers, where each pixel is represented by a single photocell. Therefore, conventional color imagers interpolate the nearest red, green and blue photocell values. However, interpolation results in blurring of the image. As a result, a gray-scale image captured by a gray-scale imager has a better quality and resolution than if captured by conventional color imagers. The invention of claim 1, as amended, overcomes such shortcoming of conventional color imagers, by not using an interpolation scheme, but rather multiplying each red, green or blue photocell value by one of red, green or blue white-balance coefficients, respectively. Applicant respectfully submits that the cited references fail to disclose, teach or suggest the limitations of claim 1, as amended, for generating a gray-scale image using a color imager.

Accordingly, applicant respectfully submits that claim 1, as amended, and its dependent claims 5-8 should be allowed. Further, independent claim 16 has been amended to include limitations similar to those of claim 1, as amended. Thus, claim 16, as amended, and its dependent claims 18-20 should also be allowed.

**B. Rejection of Claims 10, 11, 13-15 and 22 under 35 USC §103(a)**

The Examiner has rejected claims 10, 11, 13-15 and 22, under 35 USC §103(a), as being unpatentable over Kingetsu in view of Nakayama, et al. (US 2002/0027601 A1) (“Nakayama”).

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Applicant respectfully submits that claims 10, 11, 13-15 and 22 have been cancelled by the present amendment. Accordingly, the Examiner's rejection of claims 10, 11, 13-15 and 22 has been rendered moot.

**C. Rejection of Claim 9 under 35 USC §103(a)**

The Examiner has rejected claim 9, under 35 USC §103(a), as being unpatentable over Kingetsu in view of Matsui, and further in view of Roberts (USPN 5,541,654) ("Roberts").

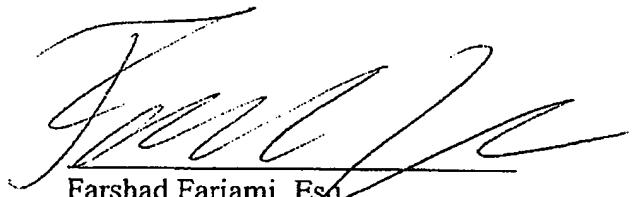
Applicant respectfully submits that claim 9 depends from claim 1 and should be allowed at least to the reasons stated above in conjunction with patentability of claim 1.

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**D. Conclusion**

Based on the foregoing reasons, an early Notice of Allowance directed to all claims 1, 5-9, 16 and 18-20 pending in the present application is respectfully requested.

Respectfully Submitted,  
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